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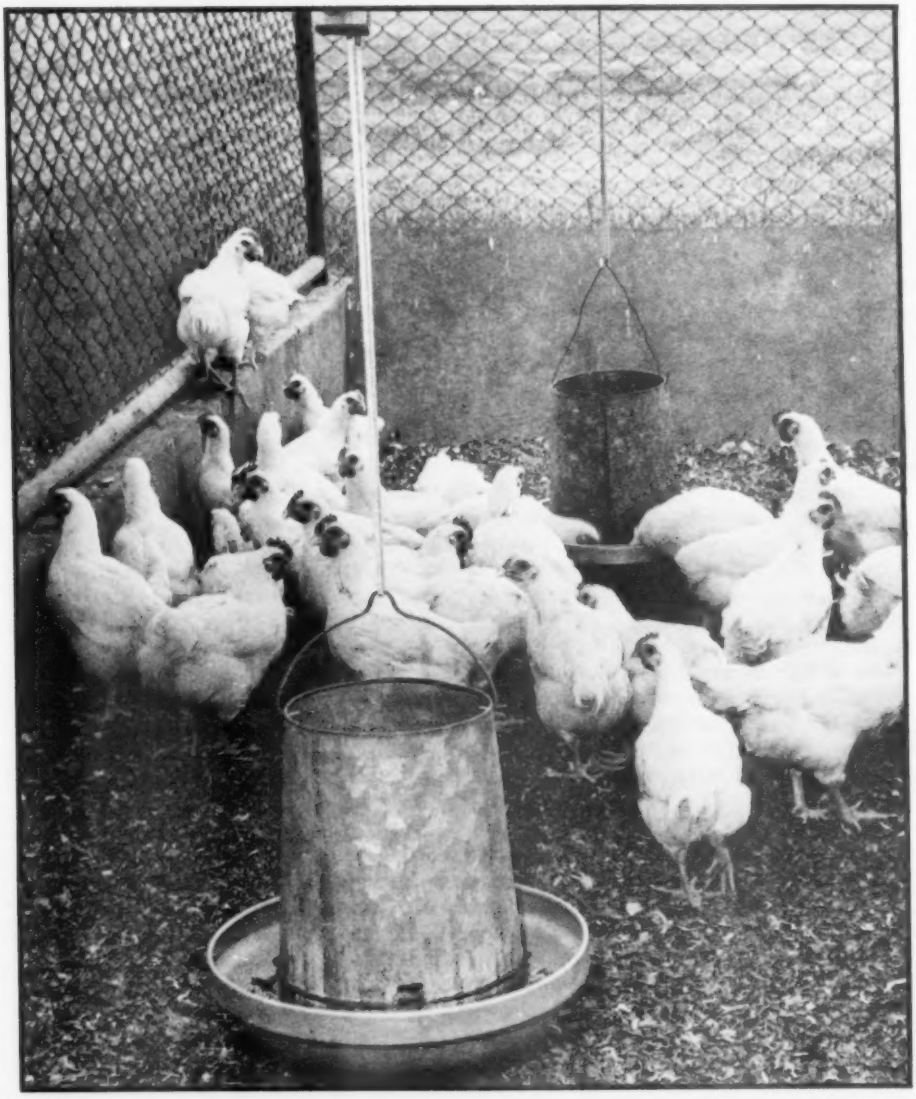

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Poultry farm in Peru—an expanding market for U.S. soybeans.

Meat Boom Sparking Latin American Demand For U.S. Soy Products

U.S. exporters of soybeans and products are finding some of their most promising markets virtually in the backyards of rival soybean exporters such as Brazil, Argentina, and Paraguay. The reason: Rising meat production in Latin America and logistics that often give U.S. exporters the price advantage over those in Latin America.

Some of the world's fastest rates of population growth, together with chronic protein deficits and rising incomes, are stimulating meat production in Latin America. Concurrently, these nations are stepping up imports of livestock feed ingredients, including U.S. soybeans and soybean meal.

Last year, the United States shipped $357 million worth of soybeans and soybean products to Latin America, more than doubling the figure for 1976. And further sharp gains are anticipated, despite the fact that Latin America is the home of the biggest U.S. rivals in world soybean and soybean product trade.

Dr. Don H. Bushman, animal nutritionist with the Mexico City office of the American Soybean Association (ASA)—an FAS cooperator in overseas market development—sees shipments of U.S. soybeans and meal to the region rising by at least 50 percent in the next 5 years. His projections indicate the volume of such exports could climb from 875,000 metric tons, soybean meal equivalent, in 1977 to 1.4 million by 1982. And the actual gain could be even greater since shipments this year and last have been running ahead of earlier projections.

"Most of these countries have a population growth rate of 3 percent or more, which means that they may double their populations in less than 25 years, so I think that we will definitely see larger exports going to Latin America," said Bushman.

For the near term, he also sees possibilities for larger sales of U.S. soybeans and meal because of accelerating demand from Mexico, Peru, possibly Venezuela, and other markets at a time of reduced exportable supplies in Brazil.

Mexico—market for nearly half of all U.S. exports of soybeans and products to the region last year—anticipates reductions in its 1978 production of soybeans and other oilseeds as a result of the severe drought there. Bushman said that the country's soybean crop will be down at least 100,000 tons from the 1977 crop of over 500,000 tons. Farmer disappointment with world prices and low water levels in reservoirs in the northwest reportedly account for the decline below the high levels of 1977.

The country also faces an unusually big vegetable oil deficit of up to 120,000 tons this year as a result of the domestic crop shortfalls.

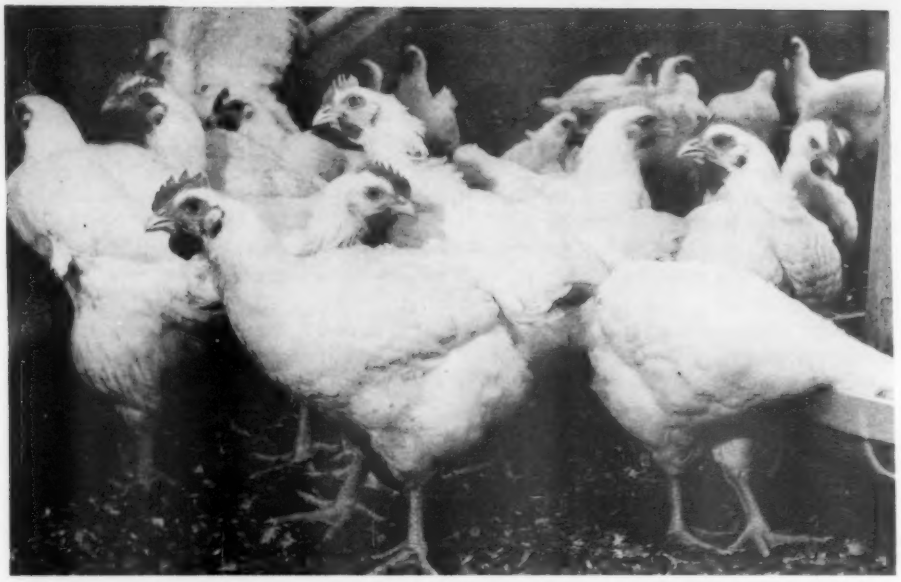
According to Bushman, these problems prompted oilseed crushers to request that the Government purchasing agent, CONASUPO, import 1 million tons of soybeans in 1978. If realized, this would be 120 percent above the 450,000 tons of soybeans imported in 1977 (September-August).

As in the past, most of this can be expected to come from the United States. In calendar 1977, this country shipped 519,000 tons of soybeans and meal (meal equivalent basis) and 89,000 tons of soybean oil and the oil equivalent of soybeans to Mexico. In value terms, these exports added up to $177 million, against only $62 million the year before—enough to rank Mexico eighth among all U.S. soybean and soybean product markets.

Bushman said that Mexico's per capita yearly consumption of pork rose from 4.5 kilograms in 1970 to 7.4 in 1975; poultry meat, from 4 kilograms to 5; and eggs, from 119 pieces to 135. Yet Mexico still consumes only about 28 kilograms of meat (including poultry) per capita compared with 113 in the United States.

"They are trying to show essentially the same percentage increases between 1975 and 1980," he continued. "But to do this, they must expand livestock production tremendously because of the rapid increase in population: Mexico should reach around 72 million people by 1980 or 1981, and by the year 2000 it will have 120-140 million."

These population pressures will push domestic demand for soybean meal far above the 1-1.2 million tons a year now prevailing. "In the next 20 years, requirements could grow to at least 4 million tons," said Bushman. "Furthermore, I don't see much chance of Mexico's domestic soybean production increasing beyond 500,000-600,000 tons a year."



Clockwise from top left: Chickens used in a poultry feeding trial in Peru, where part of the fishmeal ration was replaced with soybean meal; swine used in feeding trial in the Dominican Republic; and a poultry nutrition team from Latin America visits an egg-breaking plant in the United States.

Peru, last year a $40.6 million market for U.S. soybeans and products (largely oil), is stepping up soybean imports in 1978, despite the fact that its fishmeal exports compete with U.S. soybean meal in other markets. The reasoning here is that the country can save some $10-$20 million a year by importing soybeans and meal and exporting the higher priced fishmeal. This is especially important now since offshore fisheries are depleted, and a continuing ban on anchovy fishing seems likely to depress Peru's fishmeal production below even the reduced 493,000 tons of 1977. (On April 17, the Ministry of Fisheries did authorize catches of sardines, jurel, and needlefish for oil and meal production.)

Moreover, the country has been encouraged to buy from the United States as a result of the availability of credit from the Commodity Credit Corporation (CCC) for the purchase of U.S. soybean meal.

In the first 2 months of 1978, Peru already had purchased 35,000 tons of U.S. soybeans, compared with 26,000 tons imported during all of 1977. Total purchases could reach 80,000 tons.

The third largest U.S. market in Latin America, Venezuela likewise could give an upward thrust to U.S. sales in the near future if it revises policies that now restrict the use of soybean oil.

These policies include restrictions on use of soybean oil, in part to protect domestic oilseed producers. While soy oil is used in margarine and shortening manufacture, it is not approved as a cooking and salad oil. Consequently, Venezuelan imports of it—and soybeans as well—have been limited. This is evident in trade statistics that show imports of soybeans holding about steady during the first half of the 1970's while those of other oilseeds have skyrocketed. Concurrently, the share of the market held by soybeans has fallen from 90 percent at the beginning of the decade to around 30 percent recently.

But rising domestic prices for vegetable oil have prompted the Venezuelan Government to consider changing its policy to permit use of soybean oil. "Once this change comes about, you will see a tremendous jump in soybean sales to Latin America because Venezuela has a vegetable oil deficit of around 120,000 tons a year," said Bushman. "Soybean oil, being lower in price than other vegetable oils, would capture a good portion of this market. The country also will probably go to processing soybeans, which it does very little of right

at the present time."

So far, Venezuela has used more vegetable oil than meal. But its livestock industries are expanding rapidly, so demand for soybean meal is likely to gain.

Despite Venezuela's restrictive import policies, the United States sold $36 million worth of soybeans and products there last year, compared with only $19 million worth in 1976. These imports included 156,790 tons of soybeans and meal, soybean-meal equivalent.

ASA also works in some 16 other markets of Latin America, with varying degrees of activity depending on the market's size.

In virtually all these nations, swine and poultry industries are in expansion phases with little letup in sight. "Most of the countries are increasing their poultry production by about 8-10 percent per year," said Bushman. Almost without exception, these poultry industries are quite modern, patterned as they are after those in the United States, and consume upwards of 85 percent of all soybean meal used in livestock feed.

Swine Industries Changing Less Rapidly

Swine industries, in contrast, still revolve largely around the traditional "pig on a string" operations, where small farmers raise a few pigs on table scraps, acorns, and other noncommercial feeds. Even this is changing, however, with countries like Mexico, Panama, and the Dominican Republic moving rapidly toward modern industries.

As these industries begin using more scientifically formulated feeds, demand for soybean meal will grow, giving further impetus to imports of soybeans and their products.

In the most promising of these markets — including some of the Caribbean islands and Central American nations, as well as Mexico, Peru, and Venezuela—ASA has adopted a case-by-case approach to market development.

In Mexico, it carries out swine feeding demonstrations on small farms with the hope that one farmer's successful use of soybean meal will motivate others to adopt similar techniques.

Among large-scale poultry and swine producers in northern Mexico, on the other hand, ASA keeps users supplied with Spanish translations of up-to-date technical information and conducts seminars on the most sophisticated feeding techniques. "For example, at one of our recent seminars we got into discussions on specific amino acid requirements for the laying hen in terms of milligrams per day—not percent of the feed," said Bushman.

In Peru, demonstrations of how soybean imports and fishmeal exports could cut costs and save on foreign exchange led to the breakthrough in U.S. soybean sales there. Part of the justification for this new posture came from an ASA poultry feeding trial last year that used 15 percent soybean meal rations in tests on some 620 broilers. These tests demonstrated the economic advantage of using soybean meal, even when fishmeal is subsidized at a price below that of soybean meal.

"In Chile, we're trying to initiate a program to encourage use of full-fat soybean meal, which provides energy as well as protein, particularly in the broiler diets," Bushman continued. "The reason is that they can buy beans on the world market at a fairly reasonable price, especially compared to prices of feed-grade fats and oils."

Bushman added that in Chile—and Peru as well—heavy feed use of fishmeal contributes to the poultry disease, Black Vomit, which cuts productivity and results in a 5-10 percent mortality rate.

Similar trials with full-fat soybean meal already have been conducted in Colombia, where failure to import soybean meal until recently contributed to a severe domestic shortage of meal. "The farmer could actually buy the whole soybeans at almost the same price as soybean meal—and sometimes for less," explained Bushman.

Trials Show Advantages Of Soybean Meal

These trials showed that full-fat soybean meal could be used in Colombia at a level of 10 percent of layer diets. They also demonstrated the advantage of using all soybean meal as the protein source, as opposed to combinations of cottonseed, soybean, and fish meals.

Among Caribbean nations, a lack of domestic oilseed production, plus their nearby location to the United States, has created some sizable markets for U.S. soybean meal. Jamaica, for instance, took 49,000 tons of U.S. soybeans and meal, meal equivalent, in 1977. Last year, it ranked as the fifth largest Latin American market for U.S. soybeans and products, while the Dominican Republic was ninth and Trinidad, 11th.

Construction of new oilseed crushing and processing plants in the region and still-growing demand point to further sales gains in the region.

In Central America, oilseed meal needs average 25,000-30,000 tons each for all countries, with a sizable share of the meal supplied from domestic cottonseed crops.

However, use of imported soybean meal is surprisingly high in several nations there, and—with the exception of Panama—these countries buy almost exclusively from the United States.

To tap the market further, ASA has been demonstrating the efficiency of using soybean meal along with cottonseed meal in poultry feeds. Results have been promising so far.

"It is interesting to note," said Bushman, "that El Salvador—a very tiny country—was our fifth largest market for soybean meal in all of Latin America last year."

Guatemalans likewise have found it advantageous to use U.S. soybean meal. Results of feeding trials with rations of one-third soybean meal and two-thirds cottonseed meal—and the reverse—were demonstrated at the May 6-13 Central American Livestock Show (EXPICA) in Guatemala City.

At the show, ASA also had a consumer-education campaign showing how modern techniques are changing the Central American swine industry. This is intended in part to offset the traditional bias in the region against pork consumption.

With poultry, in contrast, the consumer bias favors "barnyard" chickens because of the yellow color that carotene in grass and other elements of their diet gives to the chicken flesh and egg yolk. "Consumers associate this with being a fresh egg and prefer that to commercial production." Bushman acknowledged, however, that they are moving away from this preference since commercial production is now a reality in most of Latin America.

Swine and poultry industries also are expanding in those countries that compete with the United States in world soybean markets—Brazil, Argentina, and Paraguay. Respectively, these are the three largest soybean exporters outside the United States.

Brazil Swine Industry Modernizing

Brazil has the largest swine population in Latin America—some 36 million head—but is just beginning to shift to commercial production. As growth accelerates in this industry—and in poultry production—the country will be under pressure to keep more of its soybean meal for domestic use.

Brazil exports a larger portion of its crop—about 70 percent—than the 64 percent share normally shipped by the United States. But domestic use has picked up, and the Government is strongly encouraging domestic crushing of soybeans with the idea that more of these products will be used at home.

Needless to say, Brazil and the other Latin American soybean exporters are important factors in the region's soybean and meal markets. And in some cases political considerations have prompted countries to buy from Brazil even when U.S. soybeans and meal are cheaper.

Some examples:

- Mexico in 1976 took about 50 percent of its soybean meal imports from Brazil, whereas it traditionally has imported largely from the United States;
- During the first part of 1977, Brazil almost completely supplanted the United States as a supplier of soybeans to Venezuela, reportedly as the result of an agreement to exchange Venezuelan crude oil for Brazilian soybeans;
- Brazil supplies about 20 percent of the soybean meal imported by Panama and Jamaica and 30 percent of Barbados imports, even though freight rates favor the U.S. products.

Yet often the Latin American exporters cannot deliver products within the region as cheaply as the United States can.

"The beans in Brazil are produced in the southern part," said Bushman. "Thus, to reach west coast markets, they either have to go down around the tip of South America or up the east coast and through the Panama Canal."

The United States, on the other hand, ships direct from New Orleans to nearby markets in the Caribbean, Central America, and northern South America.

Moreover, Brazil's presence in other Latin American markets may be severely limited this year since the country's 1978 crop was adversely affected by drought and is now estimated more than 2 million tons below the 12.2 million tons of 1977. As a result, Brazil is expected to export only about 800,000 tons of soybeans in 1978—nearly 70 percent less than last year's. Exports of soybean meal and oil will decline, but not by as much as soybean exports.

Moving up on Brazil—and the United States—in world soybean exports is Argentina, which expects to ship 1.5 million tons of soybeans this year, compared with a little over 600,000 in 1977. Argentina, and Paraguay as well, are highly competitive with the United States in Chile and Peru because of proximity to these markets. However, they are not price-competitive in the northern markets of Latin America, and for soybeans and meal shipped in bulk the United States can about match their price even in Chile and Peru.

Bushman sees little possibility of other Latin American producers getting into the export business, or even approaching self-sufficiency. Mexico, Ecuador, Colombia, and a few other nations recently have stressed soybean production, but with mixed results. In Colombia, for instance, production temporarily passed the self-sufficiency level in 1975/76 only to fall back when high support prices made the country noncompetitive in world markets.

Ecuador's production has moved up as a result of high support prices, and there has been talk in Venezuela of using support prices—$10-$12 per bushel—to encourage domestic output. "At that price, they could produce," said Bushman. "But as long as the world market price is $7 per bushel or less, the question is can they afford to do this?"

He added that relatively low world prices of beans tend to favor the U.S. farmer "because his cost of production is much less than in most countries of Latin America."

Climate is one limiting factor. "Yields normally are lower in the tropics, although there are some exceptions, as in the fertile valleys of Colombia."

Another problem in the tropics is the lack of cold weather as a check on insects and disease, which—conversely—flourish in the heat and high humidity of such areas. Probably even more important is the fact that there are other crops that compete more favorably with soybeans for land.

"Another thing," concluded Bushman, "is that looking down the road the problem in Latin America may be food, period. What I think we'll see eventually is demand beginning to grow faster than supply." □

U.S. Exports of Soybeans and Soybean Meal to Latin America, 1967-77[1]

[In 1,000 metric tons]

Country	1976	1977
Mexico	188.4	519.4
Venezuela	94.4	157.2
Jamaica	36.1	49.4
Dominican Republic	43.8	26.9
El Salvador	11.0	22.4
Peru	27.3	20.8
Trinidad-Tobago	20.1	19.3
Colombia	2.2	14.3
Guatemala	10.4	10.3
Costa Rica	8.1	7.4
Honduras	6.4	7.0
Panama	5.4	6.3
Nicaragua	3.7	5.9
Guyana	6.9	5.2
Barbados	3.6	3.8
Ecuador	0	.5
Chile	.3	.3
Haiti	.1	.1
Total	467.9	876.4

[1] Includes soybean meal and the meal equivalent from soybeans.
Source: U.S. Bureau of Census.

EC Sugar CAP Celebrates 10th Birthday, But Problems Still Exist

By Leslie C. Hurt

A full decade of the European Community's (EC) Common Agricultural Policy (CAP) on sugar has solved some of the Community's problems regarding sugar production and pricing, while at the same time giving rise to others.

During these 10 years, the EC has shifted from being a net exporter of sugar to a net importer and back again to being a substantial net exporter. The sugar policy played a big role in this; however, there are also other factors.

The addition of Denmark, Ireland, and the United Kingdom—which began phasing into the CAP in 1973—was the main reason for the shift to a net-importer status. When the Commonwealth Sugar Agreement expired at the end of 1974, the Lomé Convention assured most previous suppliers to the United Kingdom market of a total EC market for 1.3 million metric tons. Despite this large import commitment, the EC is currently a substantial exporter of sugar.

Sugarbeets are produced in all nine EC countries. Additionally, the cane produced in the French overseas Departments of Guadeloupe, French Guiana, Martinique, and Réunion is also supported under the CAP. Target and intervention prices are pegged to output in the main production areas of northern France. Refiners must pay a minimum price for beets in their contracts with growers.

Common pricing and Community preference are aided by the variable levy system. The market for sugar is supported by government purchases at fixed support, or "intervention" prices (except for "C" or overquota production). The intervention price is set a little below the desired wholesale or "target" price. Imports must meet a minimum import price, or "threshold" price, which is equal to the target price plus transportation costs to Palermo, Sicily.

The administration of the CAP has been complicated considerably since 1971 by the introduction of floating exchange rates. A change in exchange rates results in a change in export and import prices, but not in farm support prices.

Beginning in 1968, a system of production quotas was established and allocations were made to each sugar factory. The initial quotas were well above levels indicated by previous production history. Production very quickly exceeded basic quotas, but human consumption took several years to catch up. If a refiner produced more than 135 percent of his base quota, the excess had to be exported—and without the benefit of subsidy. This percentage has been reduced for the 1978/79 year (beginning July 1) to 127.5 percent of the base quota.

Sugar consumption requirements are not much different now than they were in 1967, prior to the EC sugar CAP. EC consumption reached its highest level ever in 1974—11.4 million metric tons (raw value basis). Requirements now are about 1 million tons below that level.

EC growers recently complained that they are faced with declining sugar consumption and high taxes in their home markets. The United Kingdom is the largest consumer, with the 1.3 million tons obtained from the ACP (African/Caribbean/Pacific) countries each year accounting for half of total utilization. Peak consumption in 1974 in the United Kingdom was about 20 percent—or 500,000 tons—above the current level.

Sugarbeet area for 1978 in the EC nine is estimated at 1,750,000 hectares. This compares with 1,425,000 hectares in 1967, and indicates an increase since the inception of the sugar CAP of 23 percent. The big jump in area came in 1975, following the high record prices of 1974.

Substantial increases were made in France, West Germany, and Italy, with some increases in the other member countries. In 1977 and 1978, there have been some area cutbacks, with France and West Germany accounting for the largest part of the decrease.

The EC Council of Ministers took a hard look at farm prices before approving a 2.5-percent average increase for all farm products for the 1978/79 year. The increase for both sugar and sugarbeets amounted to 2 percent (in units of account). In national currencies, the average price increase is estimated at about 5 to 5.5 percent, taking into account the devaluations earlier this year of the U.K., French, and Italian green rates. (The green rate is the unit of account quoted in the national currency of EC Member States.)

Because the value of the dollar declined during 1977/78, the percentage of average increase in terms of dollars was considerably greater. Prices for beets and white sugar in 1978/79 compared with 2 previous years, are shown in the table below.

The EC sugar surplus since 1976 has coincided with world oversupply. Low and declining world prices have resulted in larger export subsidies. In 1977, exports from the EC were reportedly 3.6 million tons of white sugar, or 3.9 million tons on a raw basis. This would amount to about 15 percent of world sugar exports. The sugar to be disposed of from the 1977/78 campaign amounts to well over 3 million tons.

It has been estimated that it will cost the Commu-

EC: Minimum, Target, and Intervention Prices for Sugar, 1976/77–1978/79

Price category	1976/77	1977/78	1978/79
Minimum price (sugarbeets) (per metric ton)	$30.70	$31.79	$40.21
Target price (cents/kg)	43.58	46.67	54.63
Intervention price (cents/kg)	41.42	44.31	51.92

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nity more than 600 million units of account (US$810 million at 1 u.a.=$1.33) to sell this sugar. Most of this has been sold, and it is contemplated there will be very little addition to stocks. The EC's release of large quantities on a world market, already burdened with huge surpluses, was done on an orderly basis. However, it was accomplished only with substantial export subsidies.

The EC is in a prominent position in the world sugar picture. It ranks first in production, second only to the USSR in consumption, and is both a large importer and exporter.

Because of this important position the EC could very well influence the degree of success achieved by the 1977 International Sugar Agreement (ISA). The EC participated in the negotiations, but consistently argued against export quotas, which became the primary feature of the final pact.

Because the ISA is based on quotas, the EC has not yet accepted the Agreement.

At the May session of the International Sugar Council in London, a committee was appointed to further negotiate with the EC in an effort to get it to join.

A provision of the Agreement may affect the EC considerably, even if it does not become a member. Article 57 provides that members will limit their sugar imports from nonmembers to 55 or 75 percent (depending on the price level) of the amount bought from nonmembers as a group over the 4-year period, 1973-1976. The EC was a net importer in all those years and therefore will not be able to ship large amounts of sugar to ISA-member countries.

There are ominously dark clouds on the horizon for EC sugar. Continued surplus production is likely at present support prices, and the world situation is one of oversupply. EC exports of sugar are subsidized, a very costly procedure.

Another problem—viewed by some as a real thorn—is the Community undertaking, for an indefinite period, to buy up to 1.3 million metric tons of sugar from ACP countries at guaranteed prices. Those advocating elimination of ACP sugar purchases point out that such imports account for a major portion of the current EC surplus.

Despite the large imports of ACP sugar, the EC is definitely a net exporter. However, this status has only been attained at a high cost to the Community for support and export subsidization. Quota provisions of the EC sugar policy are scheduled to phase out on June 30, 1980, but there is some support for application of a similar system beyond the expiration date.

It is likely that in most Member States there will be a drop in 1978/79 in the real value of support prices for sugar. Considering the EC Commission's forecasts for inflation in Member States in 1978, it seems likely that there will be a small drop in real terms in West Germany and France, a somewhat larger drop for Belgium and the Netherlands, and a much larger drop for Denmark.

The Commission has indicated by its proposals that it wants to restrain—although very moderately—Community sugar production. Farmers, of course, have to relate the favorable income from sugarbeets against that from other crops. On balance, the 1978/79 program appears to give a small net discouragement to beet producers. □

Record Oilseed Output Forecast for Argentina

Argentina's total oilseed production in 1978 is forecast at a new high and continued expansion in 1979 is seen, although constant rains during March have reduced significantly this year's prospective outturn of peanuts, sunflowers, and linseed, reports Charles J. O'Mara, U.S. Agricultural Attaché in Buenos Aires.

Huge increases in planted area for soybeans and sunflowers more than offset the damage due to rain and opened the way to the record production year. An upsurge in exports of oilseed and products again is led by soybeans. Argentina is the world's third largest producer-exporter of soybeans and products, next to Brazil and the United States.

Major factors affecting the production upturn in the Argentine oilseed sector this year were strong producer confidence in oilseed prices and reduced expectations for grains.

The country's total oilseed output this season is forecast at 4.4 million metric tons, resulting mainly from the substantially larger plantings of soybeans and sunflowers. Edible oilseed outturn is expected to rise 16 percent above that of 1977 to 3.7 million tons, despite heavy rains and flooding in March that mostly affected peanuts, flaxseed, and sunflowers. Inedible oil output is forecast at 673,000 tons, down only marginally from last season's.

The rains caused little damage to this season's soybean crop, whose outturn is placed at a record 2.2 million tons, a gain of 57 percent over the 1977 harvest of 1.4 million tons. Producer confidence in oilseeds in general and soybeans in particular spurred a shift from cattle and grains—largely wheat and sorghum, and to a lesser extent, corn. The switching in resources led to a 41 percent increase in harvested oilseed area. Soybean area alone expanded 43 percent to 947,000 hectares.

Although the rain damage reduced the estimates of Argentina's sunflower crop from 1.5-1.6 million tons, the current forecast of 1.3 million tons is still a record level. Average yields are expected to exceed last season's as weather conditions in areas not greatly affected by the heavy rains will be above average. Harvested area also expanded sharply—41 percent—from 1977's. While planted area of sunflowerseed is not expected to increase substantially over the next few years, production will continue to rise because of greater use of high-yielding hybrid seeds.

The March rains were most damaging to the Argentine peanut crop, cutting the production forecast to 300,000 tons—half of last season's outturn—even though planted area rose 17 percent from 1977. Yields and seed quality also are expected to be down

significantly this season.

Argentina's 1978 cotton crop is expected to reach a record of 895,000 bales (480 lb net) and cottonseed outturn should jump about 8 percent to 325,000 tons. This season's crop was little affected by the rains, and yields should about equal last season's relatively high levels.

Among inedible oils, Argentina's rain-damaged flaxseed crop, is expected to fall to 600,000 tons, slightly under last season's level despite an 18 percent increase in area. Tung nut production, also affected by adverse weather, is forecast to drop about 5 percent to 73,000 tons as dry weather in early 1978 hit the northern provinces where most of Argentina's tung production is concentrated. Drought also delayed the beginning of this season's harvest until early June.

Exports sales of many oilseed and products have been brisk this year. Soybean exports probably will exceed 1.3 million tons, more than double those of 1977. Consequently, exports of soybean oil and meal will be about the same or below last year's levels. Freed of embargoes, exports of sunflowerseed and flaxseed are expected to climb to 200,000 and 100,000 tons, respectively. Sunflower oil and meal exports are predicted to rise 61 and 12 percent, respectively.

However, expansion in export sales and reduced crop expectations for sunflowerseed have combined to create a probable oil shortage by the end of the 1978/79 marketing season. Total supply of edible oil available this season is 635,000 tons from an estimated crush of 2.2 million tons yielding about 591,000 tons of oil, plus beginning stocks. A shortfall of about 50,000 tons is anticipated after allowing for estimates of 336,000 tons for domestic consumption and 292,000 tons for export, plus 2-month carryover stocks of 56,000 tons.

Domestic consumption of edible vegetable oils increased about 5 percent in 1977 from 1976's level and another rise, placed at 8 percent, is seen this year.

Long-term expansion of Argentina's oilseed output and exports—particularly soybeans—is projected. Increases in soybean production, however, probably will not follow the pattern in Brazil during the early 1970's because Argentine farmers have a greater number of alternatives available and, under current Government production policies, double cropping of wheat and soybeans is not as advantageous here as it was in Brazil during its dramatic expansion in soybeans.

The Argentine Government does not maintain price supports or income-guarantee programs. Thus, producers plant oilseeds on price expectations alone —without the benefit of Federal protection or futures marketing hedging.

In general, the Government's trade policy follows the same "hands off" pattern, although the export registration does provide an immediate tool if needed. Moreover, the export embargoes on flaxseed and sunflowerseed have been removed for the new crop (1978) exports. The Government provides an export incentive for soybeans, which like all oilseed products, are free of the export retention tax. However, all oilseeds—except soybeans—are subject to a 10 percent export levy (f.o.b. Argentine ports), but the retention tax applied to tung oil is currently being rebated. □

Cattle Stress Minimized in Jet Aircraft Transport

A jumbo 747 jet aircraft roared down the runway of Kennedy International Airport recently, bound for Belgrade. A routine flight, but a significant achievement in air cargo service—the world's first 747 flight with a cargo consisting entirely of Holstein-Friesian breeding cattle. Only partial loads of cattle had been shipped aboard 747's previously.

The 241 U.S. heifers on the cargo manifest reached Belgrade only 8 hours after their takeoff from Kennedy, free from the stresses often associated with long international journeys and ready to begin their prescribed 30-day quarantine period in the same good physical conditions noted by the buyer's veterinarians immediately prior to the start of their trip.

The decision to use a jumbo jet was made because twice as many animals can be shipped as in the aircraft normally used, the jet was available at the time it was needed, and the price was satisfactory.

The 747 was one of four aircraft carrying a total 510 registered Holstein heifers to Yugoslavia.

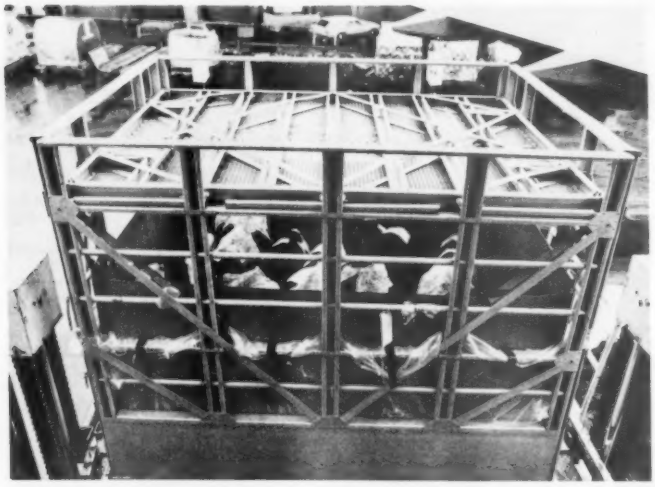
One of the unusual aspects of the 747 shipment was the completely mechanized loading operation. Metal crates, especially designed for 747 cargoes and each with a capacity of 8-9 yearlings, were used in the automated loading operation. Automation makes the loading job easier in the United States, but lack of appropriate unloading equipment at some destination terminals prevents universal use of the system.

In March, a Yugoslav selection team—a veterinarian, a geneticist, and two representatives of the trading company — inspected each animal and accepted about 90 percent of those offered. The heifers selected were purchased from breeders in Wisconsin, Ohio, Pennsylvania, Maryland, New York, and New Jersey.

U.S. Holstein-Friesian animals inspected for export during 1977 reached a record 68,098 head, substantially more than the 52,083 head exported in 1976 and slightly more than the 67,283 head exported in 1975. Exports of all dairy breeding cattle in 1977 were 72,305 head, compared with 56,316 in 1976 but down slightly from the 73,277 head exported in 1975.

Europe was the fourth largest regional export market for U.S. dairy breeding cattle in 1977 and Yugoslavia was an important market in that region. U.S. exports to Europe totaled 9,587 head in 1977 (compared with 3,845 in 1976). Yugoslavia took 6.6 percent of the European total last year (659 head), compared with 1.8 percent (28 head) in 1976.

In order of importance, regional markets for U.S. breeding cattle were North America, Asia, the Mideast, Europe, and Africa. □



Clockwise from top right, an especially designed metal crate containing part of a shipment of 510 Holstein-Friesian breeding cattle bound for Belgrade; exterior of Jumbo 747; interior of the giant plane, where automated handling equipment made it possible to spot the crates anywhere in the plane by pushing buttons on a control panel; closeup of crate, each with capacity of eight to nine yearlings; cattle arriving at J.F. Kennedy airport, New York.

"More Potatoes!" Say Venezuelans Despite '77 Boom Crop

By Franklin D. Lee

Top, bagged Venezuelan potatoes in the field, awaiting pickup for delivery to stores in the city. Bottom, one of many potato farms located in the State of Lara, Venezuela's main potato-producing area.

Venezuela had a record 190,000-metric-ton potato harvest in 1977, and although this bumper potato crop was a blessing, it aggravated some major problems. Primarily because of lack of storage facilities and increased demand for potatoes, subsequent smaller harvests may not be able to keep pace.

The excellent 1977 crop represented a 41 percent increase over the previous year's 135,000-ton outturn and was the result of a 24 percent rise in yields per hectare, a 14 percent expansion in planted potato area to 16,000 hectares, and excellent weather.

But unless Venezuela's potato industry is able to hurdle the many obstacles it faces—both natural and manmade—the country probably will remain a net importer of both fresh and processed potatoes. These obstacles include:

- A need to introduce new, higher yielding potato varieties;
- Natural geographic limitations;
- Soil depletion as most potato growers fail to rotate their crops;
- Lack of storage facilities; and
- Rapidly developing pressure from rising domestic consumption.

Venezuelan potato growers currently plant primarily three varieties—Maine's Sebago, Maine's Kennebec, and the Dutch Alpha. In field tests conducted over 25 years ago, these varieties appeared to have the highest yield potential for Venezuela's soil and climatic conditions.

These varieties were found to be resistant to diseases that were devastating other potato varieties previously grown in Venezuela. However, some producers continued to cultivate some lower yielding varieties. The growers who accepted the field test results got extremely high yields, those that continued with the lower yielding varieties obtained sometimes less than 1 ton per hectare, primarily as a result of disease losses. Currently, average yields are about 20 tons per hectare.

During 1960-69, average yields in Venezuela were only 8 tons per hectare; however, in 1977, the yield increased to about 12 tons per hectare. As more producers switch to the improved varieties, average yields should increase. However, the switchover seems to be taking place too slowly to keep pace with domestic demand for potatoes.

Last summer, several members of the Association of Horticultural Producers in the State of Lara—the primary potato-producing area—traveled to Canada and the United States searching for higher yielding potato varieties suitable for Venezuela's climatic conditions. These producers reported that several hybrid varieties produced at the University of Minnesota should do well in Venezuela. The Association has imported seed samples from Minnesota and other major producing States for field tests.

Should the field tests prove positive, the Association—which controls 40 percent of Venezuela's annual potato outturn—would be inclined to purchase substantial quantities of U.S. seed potatoes. The majority of the seeds currently used in Venezuela are from Canada.

The author is Assistant U.S. Agricultural Attaché, Caracas.

Another obstacle confronting Venezuela's potato growers is a geographical limitation on the availability of land.

Venezuela's tropical climate is not suited for potatoes, so the major potato-producing regions are located in high-altitude areas where the climate is cooler, rains more frequent, and soils more suitable.

Consequently, because of the location of these regions, area expansion is limited to the availability of appropriate land, which has virtually been exhausted. Therefore, any expansion in potato output likely will come from yield increases, rather than gains in planted area.

Because potato consumption is gaining rapidly—and if domestic outturn is unable to keep pace with requirements — consumers would be forced to switch to substitute items, such as yucca and plantains. Or perhaps the Government of Venezuela may have to resort to importation—something it would prefer to avoid, given current balance-of-payments problems.

The potato industry is also faced with the problem of soil depletion that is the result of failure to rotate crops.

Many potato growers have concentrated on potato production for years and do not want to switch to other crops. Others perceive alternating crops as a risk because other commodities never have been grown in these traditional potato areas. They fear that any other crop may fail or prove unprofitable.

At the same time, other growers believe that a crop rotation plan would reduce potato supplies for Venezuelan consumers.

This belief results from the natural geographical limitations imposed on the potato regions in Venezuela. Since virtually all usable potato land is currently under cultivation and is needed to keep pace with expanding demand, crop rotation would create—at best—cyclical movements in potato production. And the long-term consequence to nonrotation is a reduction in yields because of soil depletion.

Of all the difficulties that Venezuela's potato growers must face, the lack of sufficient storage capacity is one of the most frustrating.

Each year, thousands of tons of Venezuelan potatoes are lost to spoilage because of poorly maintained storage areas, and often the complete absence of storage facilities. About one-third of the 1977 crop was lost for this very reason.

One result of inadequate storage areas is that Venezuela must import fresh potatoes—primarily from the United States and Colombia.

Because of the perishability of potatoes and because they must compete for storage space with other basic crops such as rice, corn, beans, and meat, potato growers are susceptible to large losses each year.

Onfarm storage facilities are usually limited or nonexistent. Public and private storage capacity in Venezuela was in a deficit of over 1 million tons for calendar 1977. Although the Government has plans to meet this shortfall in storage space by 1980, potato producers, meanwhile, will continue to face substantial losses each year.

Another constraint on Venezuela's potato industry is that demand for potatoes is far outpacing available supply. Until the late 1960's and early 1970's, satisfying domestic demand was not a problem. However, with the worldwide rise in petroleum prices, Venezuelan cities experienced a great influx of people from the rural areas. This put pressure on potato supplies because these people seem to prefer the potato rather than its nearest substitute —yucca. As a consequence, demand has outstripped potato supplies.

Also, the market for potato products—frozen french fries, potato chips, and dehydrated potatoes—has increased substantially during the past 3 years.

This is particularly applicable for frozen fries and potato chips, as fast-food centers have sprung up all over the country.

Except for 1977, when the record crop permitted some 2,000 tons to be exported—primarily to the Netherlands Antilles— Venezeula has been net importer of potatoes and potato products.

During 1975 (the last year for which complete data are available), Venezuela imported some 600 tons of fresh potatoes for consumption. The majority of these were from Colombia, Canada, and the United States.

Imports of dehydrated and frozen potatoes that year were 138 tons, mostly from the United States and Argentina.

For 1976, fresh potato imports were estimated at over 17,000 tons—primarily of U.S. and Mexican origin. Because of the record crop, there were no fresh potato imports in 1977.

Dehydrated and frozen potato imports from the United States and Argentina in 1976 were estimated at 38 tons. In 1977, Venezuela imported 136 tons of frozen potatoes and about 19 tons of dehydrated potatoes from the United States. Also during 1977, Venezuela purchased about 7 tons of dehydrated potatoes from Canada. □

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Larger Australian Cotton Crop To Boost Exports Sharply

Australian exports of cotton will increase sharply in late 1978 and early 1979, as the current crop will provide an exportable surplus of about 109,000 bales (480 lb net), according to Harlan J. Dirks, U.S. Agricultural Attaché, Canberra. Part of this surplus is expected to be shipped during the current U.S. cotton marketing year—probably about 40,000 bales—and the remainder will be shipped during the 1978/79 marketing year.

Exports during August/July 1976/77 totaled 24,000 bales, most of which went to Hong Kong and Japan. This was mainly low micronaire cotton, which could not be used by the Australian spinning industry.

However, exports from the 1978 crop will be mainly high-quality cotton, and should not only improve Australia's quality image in these markets, but also make it more competitive with U.S. medium-staple cottons.

Australian imports of raw cotton totaled 21,000 bales during the 1976/77 marketing year, of which about 8,000 bales were medium-staple cottons required to meet Australia's shortfall in high micronaire fiber. About 10,000 bales were long-staple cottons not produced in Australia, and about 2,000 bales extra-short- and short-staple cottons for the medical and bedding industries. It appears that for the 1977/78 marketing year imports will be reduced to about 14,000 bales.

The outlook for the 1977/78 crop has been very good, with extremely favorable conditions in New South Wales. The season in the Macquarie Valley has been the best ever, while in the Namoi the growing period has certainly been the best for some years. In contrast with recent years, the incidence of disease and insect problems has been minimal in these areas. The New South Wales crop is now estimated at about 160,000 bales, and could even go somewhat higher if favorable weather continues through the entire season. The Queensland crop is now estimated at approximately 48,000 bales, which will be a new record for the State. Consequently, total Australian production will be about 208,000 bales this season.

The outlook for the 1978/79 production season is still uncertain, as planting does not commence until September/October. Much will depend on relative returns from cotton and other crops such as grain sorghum and oilseeds. A recovery in cotton prices would certainly lead to an increase in plantings, particularly in Queensland.

However, even if there is no improvement in world market prices for cotton, plantings during the coming year are likely to be at least similar to those of this season, particularly if the season is as successful as now expected. In addition, new irrigated farms now opening up in the Emerald and St. George Districts of Queensland will no doubt make some contribution to the area under cotton.

Australian raw cotton production during the 1976/77 season totaled 128,000 bales of 480 pounds net from a harvested area of about 33,700 hectares. The crop was somewhat smaller than originally expected, largely because of rain damage just before the main harvest in New South Wales.

Production in that State amounted to 96,000 bales, while Queensland produced 32,000 bales. Quality of the crop was fairly low, with a large proportion of the crop of low micronaire. □

World Sugar Output Up in 1977/78

The Foreign Agricultural Service now estimates world sugar production in 1977/78 at a record 90.7 million metric tons, some 400,000 tons above the March estimate of 90.3 million tons.

The new figure is about 4 million tons above the 86.8 million tons produced a year earlier. Better than expected growing conditions have improved outturns in India and Cuba, while output in the Soviet Union, Thailand, and Turkey has been adjusted downward.

World cane sugar production makes up about 62 percent of the total sugar output in 1977/78. Beet sugar production of 34.7 million tons accounts for the remainder. World beet sugar output increased by 2.7 million tons in 1977/78 from the preceding year, while cane sugar output is 1.3 million tons above that of a year ago. □